



FIG. 1

ATG GCT CGC CTA CAG ACT GCA CTC GTC GTT GTC CTC CTC GCT GTG GCG CTT CAA

GCA ACT GAG GCA GGC CCC TAC GGC GCC AAC ATG GAA GAC AGC GTC TGC TGC CGT GAT TAC

GTC CGT TAC CGT CTG CCC CTG CGC GTG GTG AAA CAC TTC TAC TGG ACC TCA GAC TCC TGC

CCG AGG CCT GGC GTG GTG TTG CTA ACC TTC AGG GAT AAG GAG ATC TGT GCC GAT CCC AGA

GTG CCC TGG GTG AAG ATG ATT CTC AAT AAG CTG AGC CAA TGA

AGAGCCTACTCTGATGACCGTGGCCCTTGGCTCCTCCAGGAAGGCTCAGGAGCCCTACCTCCCTGCCATTATAGCTGCTC

CCCGCCAGAGCCCTGTGCCAACTCTCTGCSATTCCCTGATCTCCATCCCTGTGGCTGTACCCCTTGGTCACCTCCGTGCT

GTCACTGCCATCTCCCCCTGACCCCTCTAACCCTCCTCTGCCTCCCTCCCTGCAGTCAGAGGTCCTGTTCCCATCA

GCGATTCCCCCTGCTTAACCCCTTCCATGACTCCCCCACTGCCCTAAGCTGAGGTCAGTCTCCCAAGCCTGGCATGTGGCC

CTCTGGATCTGGGTTCCATTCTGTCTCCAGCCTGCCCACTTCCCTTCATGAATGTTGGTTCTAGCTCCCTGTTCTCC

AAACCATACACATCCCACTTCTGGGTCTTTGCCCTGGGATGTTGCTGACACTCAGAAAGTCCCGTCGACGCGGCC

| |
|-----------|
| FIG. 3A-1 |
| FIG. 3A-2 |
| FIG. 3A-3 |

FIG. 3A

| | |
|---|-----|
| GTGACCCACGGTCCGCGCGAGAACCCGCAATCTTTGCGCCACAAATACACGACGATGCCCGATCTACTTTAAG | 79 |
| GGCTGAACCCACGGCCCTGAGAGACTATAAGAGCGTTCCTACCGCC | 7 |
| ATG GAA CAA CCG GGA CAG AAC | 148 |
| M E Q R G Q N | |
| A P A S G A R K R H G P G P R E A R G | 27 |
| GCC CCG GCC GCT TCG CGG GCC CGG AAA AGG CAC GGC CCA GGA CCC AGG GAG GCG CGG GGA | 208 |
| A R P G L R V P K T L V L V V A A V L L | 47 |
| GCC AGG CCT GGG CTC CGG GTC CCC AAG ACC CTT GTG CTC GTT GTC GCC GCG GTC CTC CTG | 268 |

FIG. 3A-1

| | |
|---|-----|
| L V S A E S A L I T Q Q D L A P Q Q R A | 67 |
| TTG GTC TCA GCT GAG TCT GCT CTG ATC ACC CAA GAC CTA GCT CCC CAG CAG AGA GCG | 328 |
| A P Q Q K R S S P S E G L C P P G H H I | 87 |
| GCC CCA CAA CAA AAG AGG TCC AGC CCC TCA GAG GGA TTG TGT CCA CCT GGA CAC CAT ATC | 388 |
| S E D G R D C I S C K Y G Q D Y S T H W | 107 |
| TCA GAA GAC GGT AGA GAT TGC ATC TCC TGC AAA TAT GGA CAG GAC TAT AGC ACT CAC TGG | 448 |
| N D L L F C L R C T R C D S G E V E L S | 127 |
| AAT GAC CTC CTT TTC TGC TTG CGC TGC ACC AGG TGT GAT TCA GGT GAA GTG GAG CTA AGT | 508 |
| F C T T T R N T V C C Q C E E G T F R E E | 147 |
| CCC TGC ACC ACG ACC AGA AAC ACA GTG TGT CAG TGC GAA GGC ACC TTC CGG GAA GAA | 568 |
| D S P E M C R K C R T G C P R G M V K V | 167 |
| GAT TCT CCT GAG ATG TGC CCG AAG TGC CGC ACA GGG TGT CCC AGA GCG ATG GTC AAG GTC | 628 |
| G D C T P W S D I E C V H K E S G T K H | 187 |
| GGT GAT TGT ACA CCC TGG AGT GAC ATC GAA TGT GTC CAC AAA GAA TCA GGT ACA AAG CAC | 688 |
| S G E A P A V E E T V T S S P G T P A S | 207 |
| AGT GGG GAA GCC CCA GCT GTG GAG GAG ACG GTG ACC TCC AGC CCA GCG ACT CCT GCC TCT | 748 |

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FIG. 3A-2

P C S L S G I I I G V T V A A V V L I V 227
CCC TGT TCT CTC TCA GGC ATC ATC ATA GGA GTC ACA GTT GCA GCC GTA GTC TTC ATT GTG 808

A V F V C K S L L W K K V L P Y L K G I 247
GCT GTG TTT GTT TGC AAG TCT TTA CTG TGG AAG AAA GTC CTT CCT TAC CTG AAA GGC ATC 868

C S G G G D P E R V D R S S Q R P G A 267
TGC TCA GGT GGT GGT GGC GAC CCT GAG CGT GTG GAC AGA AGC TCA CAA CGA CCT GGG GCT 928

E D N V L N E I V S I L Q P T Q V P E Q 287
GAG GAC AAT GTC CTC AAT GAG ATC GTG AGT ATC TTG CAG CCC ACC CAG GTC CCT GAG CAG 988

E M E V Q E P A E P T G V N M L S P G E 307
GAA ATG GAA GTC CAG GAG CCA GCA GAG CCA ACA GGT GTC AAC ATG TTG TCC CCC GGG GAG 1048

S E H L L E P A E A E R S Q R R L L V 327
TCA GAG CAT CTG CTG GAA CCG GCA GAA GCT GAA AGG TCT CAG AGG AGG CTG CTG GTT 1108

P A N E G D P T E T L R Q C F D D F A D 347
CCA GCA AAT GAA GGT GAT CCC ACT GAG ACT CTG AGA CAG TGC TTC GAT GAC TTT CCA GAC 1168

L V P P F D S W E P L M R K L G L M D N E 367
TTG GTG CCC TTT GAC TCC TGG GAG CCG CTC ATG AGG AAG TTG GGC CTC ATG GAC AAT GAG 1228

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FIG. 3A-3

ATTORNEY

Applicant: Douglas A. Holtzman et al.
Title: NOVEL GENES ENCODING PROTEINS HAVING
PROGNOSTIC, DIAGNOSTIC, PREVENTIVE, THERAPEUTIC
AND OTHER USES

Attorney/Agent: Jean M. Silveri
Docket No.: MPI2000-540OMNI(M)
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| |
|-----------|
| FIG. 3B-1 |
| FIG. 3B-2 |
| FIG. 3B-3 |

FIG. 3B

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| I | K | V | A | K | A | E | A | A | G | H | R | D | T | L | Y | T | M | L | I | 387 |
| ATA | AAG | GTG | GCT | AAA | GCT | GAG | GCA | GCG | GGC | CAC | AGG | GAC | ACC | TTG | TAC | ACG | ATG | CTG | ATA | 1288 |
| K | W | V | N | K | T | G | R | D | A | S | V | H | T | L | L | D | A | L | E | 407 |
| AAG | TGG | GTC | AAC | AAA | ACC | GGG | CGA | GAT | GCC | TCT | GTC | CAC | ACC | CTG | CTG | GAT | GCC | TTG | GAG | 1348 |
| T | L | G | E | R | L | A | K | Q | K | I | E | D | H | L | L | S | S | G | K | 427 |
| ACG | CTG | CGA | GAG | AGA | CTT | GCC | AAG | CAG | AAG | ATT | GAG | GAC | CAC | TTG | TTG | AGC | TCT | CGA | AAG | 1408 |
| F | M | Y | L | E | G | N | A | D | S | A | M | S | * | | | | | | | 441 |
| TTC | ATG | TAT | CTA | GAA | GGT | AAT | GCA | GAC | TCT | GCC | ATG | TCC | TAA | | | | | | | 1450 |

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FIG. 3B-1

GTGTGATTTCTCTTCAGGAAGTGAGACCTTCCCTCGTTTACCTTTTTCCTGGAATAAGCCCAACTCGACTCCAGTCAGTA 1529
 GGAAAGTGCCACAAATTGTTCACATGACCGGTACTGGAAGAACTCTCCCATCCACATCACCAGTCGATCGAACAATCCT 1608
 GTAACCTTTTCACCTGCACCTTGGCAATTAATTTTAAGCTGAATGTGATAATAAGGACACTATGGAAAATGCTCTGGATCATT 1687
 CCGTTTGTGCGTACTTTTGAGATTGTTGTTGGGATGTCTATTTGTTTTCACAGCACCTTTTTCATCCTTAAATGCTTTTA 1766
 TTTATTTTATTTTGGGCTACATTGTGAAGATCCATCTACACAGTCGTTGTCCGACTTTCACCTTGTACTATAATGATGAACC 1845
 TTTTTCGGTGGGGTGCNGGCCAATTCCACTCTGTCTCCAGGCTGGAGTGCAATGCTGCAATCTTGGCTCACTATA 1924
 GCCTTGACCTCTGAGGCTCAAGCGATTCTCTCACCTCAGCCATCCAAATAGCTEGGACCACAGGTGTGCACCACCACGC 2003
 CCGGCTAATTTTTCGTATTTTGTCTAATAATAAGGGCTCTCTATGTGTCTCAGGGTGTCTCGAAATTCCTGGACTCAAG 2082
 CAGTCTGCCACATCAGACTCCCAAAGGGTGGAAATTAGARGCGTGAGCCCCCATGCTTGGCCCTTACCTTTCCTACTTTT 2161
 TATAATTCTGTATGTTATTAATTTTATGAACATGAAGAACTTTAGTAAATGTACTTGTTTTACATAGTTATGTGCAATAGA 2240
 TTAGATAAACATATAAGGAGGAGACATACAAATGGGGGAAGAAGAAGTCCCTGTGAAGAAGTTNACGNTCTGGTTTC 2319

CAGCCTTCCCTCAGATGTACTTTGGCTTCAATGATTGGCAACTTCTACAGGGGCCAGTCTTTTGAACCTGGACAACCTTAA 2398
 CAAGTATATGAGTATTATTATAGGTAGTTGTATTACATATGAGTCGGGACCAAGAGAACTGGATCCACGTCAAGTCCT 2477
 GTGTGTGGCTGGTCCCTACCTGGGCAGTCTCATTTTCACCCCATAGCCCCCATCTATGGACAGGCTGGGACAGAGGCAGA 2556
 TCGGTTAGATCACACATAACAAATAGGGTCTATGTTCATATCCCAAGTGAACCTTCAGCCCTGTTTGGGCTCAGGAGATAGA 2635
 AGACAAAATCTGTCTCCACAGTCTGCCATGGCATCAAGGGGGAAGAGTAGATGGTGCTTGAGAAATGGGTT 2714
 GCCATCTCAGGAGTAGATGGCCCGGCTCATTCTGGTTATCTGTCAACCCTGAGCCCATGAGCTGCCCTTTTAGGGTACAG 2793
 ATTGCCCTACTTGAGGACCTTGGCCCGCTCTGTAAAGCATCTGACTCATCTCAGAAATGTCAATTCTTAAACACTGTGGCAA 2872
 CAGGACCTAGAAATGGCTGACGCATTAAAGGTTTCTCTCTGTTCTCTATTTATTTTAAAGACCTCAGTAACCAT 2951
 TTCAGCCCTCTTTCAGCAAAACCCCTTCTCCATAGTATTTCAGTCAATGGAAGGATCATTTATGCAAGGTAGTCAATCCAGGA 3030
 GTTTTGTGCTTTCTGTCTCAAGGCATTGTGTGTTTGTGTTTCCGGACTGGTTGGGTGGGACAAAGTTAGAAATTGCCT 3109
 GAAGATCACACATTCAGACTGTTGTGTCTGTGAGTTTATAGGAGTGGGGGTGACCTTTCTGGTCTTTGCCACTTCCATC 3188
 CTCCTCCACTTCCATCTGGCATCCACGGCTTGTCCCTGCATTTCTGGAAGGCACAGGGTGTCTGCTGCTCCTGGTCT 3267

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FIG. 3B-3

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FIG. 3C

ATTORNEY

Applicant: Douglas A. Holtzman et al.
Title: NOVEL GENES ENCODING PROTEINS HAVING
PROGNOSTIC, DIAGNOSTIC, PREVENTIVE, THERAPEUTIC
AND OTHER USES

Attorney/Agent: Jean M. Silveri
Docket No.: MPI2000-540OMNI(M)
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| |
|-----------|
| FIG. 4A-1 |
| FIG. 4A-2 |
| FIG. 4A-3 |

FIG. 4A

| | |
|---|-----|
| GTGACCCACGGCTCCGGCCGGAGAACCCGCAATCTTTGCGCCCAAAATACACGACGATCCCCGATCTACTTTAAG | 79 |
| GGCTGAAACCCACGGGCTGAGAGACTATAAGAGCGTTCCCTACGGCC ATG GAA CAA CCG CGA CAG AAC | 148 |
| A P A A S G A R K R H G P G P R E A R G | 27 |
| GCC CCG GCC GCT TCG GGG GCC CCG AAA AGG CAC GGC CCA GGA CCC AGG GAG GCG CGG GGA | 208 |
| A R P G L R V P K T L V L V A A V L L | 47 |
| GCC AGG CCT GCG CTC CCG GTC ACC CTT GTG CTC GTT GTC GCC GCG GTC CTC CTG | 268 |

FIG. 4A-1

L V S A E S A L I T Q Q D L A P Q Q R A 67
TTG GTC TCA GCT GAG TCT GCT CTG ATC ACC CAA CAA GAC CTA GCT CCC CAG CAG AGA GCG 328
A P Q Q K R S S P S E G L C P P G H H I 87
GCC CCA CAA CAA AAG AGG TCC AGC CCC TCA GAG GGA TTG TGT CCA CCT GGA CAC CAT ATC 388
S E D G R D C I S C K Y G Q D Y S T H W 107
TCA GAA GAC GGT AGA GAT TGC ATC TCC TGC AAA TAT GGA CAG GAC TAT AGC ACT CAC TCG 448
N D L L F C L R C T R C D S G E V E L S 127
AAT GAC CTC CTT TTC TGC TTG CGC TGC ACC AGG TGT GAT TCA CGT GAA GTG GAG CTA AGT 508
P C T T R N T V C Q C E E G T F R E E 147
CCC TGC ACC ACG ACC AGA AAC ACA GTG TGT CAG TGC GAA GAA GGC ACC TTC CGG GAA GAA 568
D S P E M C R K C R T G C P R G M V K V 167
GAT TCT CCT GAG ATG TGC CGG AAG TGC CGC ACA GGG TGT CCC AGA GGG ATG GTC AAG GTC 628
G D C T P W S D I E C V H K E S G I I I 187
GGT GAT TGT ACA CCC TGG AGT GAC ATC GAA TGT GTC CAC AAA GAA TCA GGC ATC ATC ATA 688
G V T V A A V V L I V A V F V C K S L L 207
GGA GTC ACA GTT GCA GCC GTA GTC TTG ATT GTG GCT GTG TTT GTT TGC AAG TCT TTA CTG 748

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FIG. 4A-2

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| W | K | K | V | L | P | Y | L | K | G | I | C | S | G | G | G | G | D | P | E | 227 |
| TGG | AAG | AAA | GTC | CTT | CCT | TAC | CTG | AAA | GGC | ATC | TGC | TCA | GGT | GGT | GGT | GGG | GAC | CCT | GAG | 808 |
| R | V | D | R | S | S | Q | R | P | G | A | E | D | N | V | L | N | E | I | V | 247 |
| CGT | GTG | GAC | AGA | AGC | TCA | CAA | CGA | CCT | GGG | GCT | GAG | GAC | AAT | GTC | CTC | AAT | GAG | ATC | GTG | 868 |
| S | I | L | Q | P | T | Q | V | P | E | Q | E | M | E | V | Q | E | P | A | E | 267 |
| AGT | ATC | TTG | CAG | CCC | ACC | CAG | GTC | CCT | GAG | CAG | GAA | ATG | GAA | GTC | CAG | GAG | CCA | GCA | GAG | 928 |
| P | T | G | V | N | M | L | S | P | G | E | S | E | H | L | L | E | P | A | E | 287 |
| CCA | ACA | GGT | GTC | AAC | ATG | TTG | TCC | CCC | GGG | GAG | TCA | GAG | CAT | CTG | CTG | GAA | CCG | GCA | GAA | 988 |
| A | E | R | S | Q | R | R | R | L | L | V | P | A | N | E | G | D | P | T | E | 307 |
| GCT | GAA | AGG | TCT | CAG | AGG | AGG | CTG | CTG | GTT | CCA | GCA | AAT | GAA | GGT | GAT | CCC | ACT | GAG | 1048 | |
| T | L | R | Q | C | F | D | D | F | A | D | L | V | P | F | D | S | W | E | P | 327 |
| ACT | CTG | AGA | CAG | TGC | TTC | GAT | GAC | TTT | GCA | GAC | TTG | GTG | CCC | TTT | GAC | TCC | TGG | GAG | CCG | 1108 |
| L | M | R | K | L | G | L | M | D | N | E | I | K | V | A | K | A | E | A | A | 347 |
| CTC | ATG | AGG | AAG | TTG | GGC | CTC | ATG | GAC | AAT | GAG | ATA | AAG | GTG | GCT | AAA | GCT | GAG | GCA | GCG | 1168 |
| G | H | R | D | T | L | Y | T | M | L | I | K | W | V | N | K | T | G | R | D | 367 |
| GGC | CAC | AGG | GAC | ACC | TTG | TAC | ACG | ATG | CTG | ATA | AAG | TGG | GTC | AAC | AAA | ACC | GGG | CGA | GAT | 1228 |

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FIG. 4A-3

20250303T1300

Applicant: Douglas A. Holtzman et al.
Title: NOVEL GENES ENCODING PROTEINS HAVING
PROGNOSTIC, DIAGNOSTIC, PREVENTIVE, THERAPEUTIC
AND OTHER USES

Attorney/Agent: Jean M. Silveri
Docket No.: MPI2000-540OMNI(M)
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| |
|-----------|
| FIG. 4B-1 |
| FIG. 4B-2 |
| FIG. 4B-3 |

FIG. 4B

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| A | S | V | H | T | L | L | D | A | L | E | T | L | G | E | R | L | A | K | Q | | 387 |
| GCC | TCT | GTC | CAC | ACC | CTG | CTG | GAT | GCC | TTG | GAG | ACG | CTG | GGA | GAG | AGA | CTT | GCC | AAG | CAG | | 1288 |
| K | I | E | D | H | L | L | S | S | G | K | F | M | Y | L | E | G | N | A | D | | 407 |
| AAG | ATT | GAG | GAC | CAC | TTG | TTG | AGC | TCT | GGA | AAG | TTC | ATG | TAT | CTA | GAA | GGT | AAT | GCA | GAC | | 1348 |
| S | A | M | S | * | | | | | | | | | | | | | | | | 412 | |
| TCT | GCC | ATG | TCC | TAA | | | | | | | | | | | | | | | | 1363 | |

FIG. 4B-1

GTGTGATTCCTCTCAGGAAGTGAGACCTTCCCTCGTATTACCTTTTTCCTGGAAAAAGCCCCAACTGGACTCCAGTCAGTA 1442
 CGAAAGTCCCACAAATTGTTCACATGACCGGTACTCGAAGAAACTCTCCCATCCAAACATCACCAGTGGATGGAACATCCT 1521
 GTAACATTTCACCTGCACCTTGGCAATTATTATTAAGCTGAATGTGATAATAAGGACACATATGGAAAATGCTCTGGATCATTT 1600
 CCGTTTGTGGTACTTTTGAGATTGGTTTGGGATGTTCATTGTTCACAGCACATTTCCTTAATCTCTAAATGCTTTTA 1679
 TTTTATTATTTTGGGCTACATTGTGAAGATCCATCTACACAGTCTGTTCGACCTTCGACCTTCGATCTATATGATATGAAC 1758
 TTTTTCGGGTGGGGGTGTCNGGGCAATTCCACTCTGTCTCCAGGCTGGAGTCCAATCGTGCATCTTCGGCTCCTACTATA 1837
 GCCTTGACCTCTGAGGCTCAAGCGATTCTCTCACCCTCAGCCATCCAAATAGCTGGGACCAACAGGTGTGCACCAACCCACGC 1916
 CCGGCTAAATTTTTCGTATTTCGTCTAAATATAAGGGCTCTCTATATGTTCCTCAGGGTGGTCTCGGAATTCTCTGGACTCAAG 1995
 CAGTCTGCCCCACYTCAGACTCCCAAAGCGGTGGAAATTAGARGCGTGAGCCCCCACTGCTTGGGCTTACCTTTCTACTCTTTT 2074
 TATAATTCCTGTATGTTATTATTATGAACATGAAGAAACTTTTAGTAAATGTACTTGTCTTTTACATAGTTATGTGAATAGA 2153
 TTAGATAACATAAAGGAGAGACATACAAATGGGGGAAGAAGAAGTCCCTCTGTAAAGATTTCACCTCTGCTGCTTTC 2232
 CAGCCTTCCCTCAGATGTACTTTTGGCTTCAATGATTGGCAACTTCTACAGGGGCCAGTCTTTTGTGAACCTGGACAACTTAA 2311

Applicant: Douglas A. Holtzman et al.
Title: NOVEL GENES ENCODING PROTEINS HAVING
 PROGNOSTIC, DIAGNOSTIC, PREVENTIVE, THERAPEUTIC
 AND OTHER USES

Attorney/Agent: Jean M. Silveri
Docket No.: MPI2000-540OMNI(M)
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| | |
|---|------|
| CAAGTATATGAGTATTATTTATAGGTAGTTGTATTACATATGAGTCGGGACCAAGAGAACTGGATCCACGTGAAGTCCT | 2390 |
| GTGTGTGGCTGGTCCCTACCTCGGCAGTCTCTCATTTTGCACCCCATAGCCCCCATCTATGGACAGGCTGGGACAGAGGCAGA | 2469 |
| TGGGTTAGATCACACATAACAATAGGGTCTATGTTCATATCCCAAGTGAACTTTGAGCCCTGTTTTGGGCTCAGGAGATAGA | 2548 |
| AGACAAAATCTGTCTCCACGCTTGCCATGGCATCAAGGGGGAAGAGTAGATGGTGCCTTGAGAAATGGTGTGAAAATCGGTT | 2627 |
| GCCATCTCAGGAGTAGATGGCCCGGCTCAGCTTCTGGTTATCTGTACCCCTGAGCCCATGAGCTGCCCTTTTAGGGTAGCAG | 2706 |
| ATMGCCCTACTTTGAGGACCTTGGCCCGCTCTGTAAAGCATCTGACTCATCTCAGAAATGTCAATTTCTTAAACACTGTGCGCAA | 2785 |
| CAGGACCTAGAAATGGCTGACGCATTAAGGTTTTCCTCTCTGTCTCTCTGTTCTATTATTTGTTTAAAGACCTCAGTAACCAT | 2864 |
| TTTACGCCCTCTTTCCAGCAAACCCTTCTCCATAGTATTTTCAGTCAATGGAAGCATCATTTATGCAAGGTAGTCAATTCACGGA | 2943 |
| GTTTTGTGTCCTTTCTCAAGGCATTGTGTGTTTGTGTTCCGGGACTGGTTTCCGGTGGGACAAAGTTAGAAATTCCT | 3022 |
| GAAGATCACACATTCAGACTGTGTGTCTGTGGAGTTTATAGGAGTGGGGGTGACCTTTCCTGCTCTTTCGCACTTCCATC | 3101 |
| CTCTCCCACTTCCATCTGGCATCCACCGGTGTCTCCCTGCACCTTCTGTGAAGGCAAGGGTGTCTGCTGCTCTCTGCTCT | 3180 |
| TTGCCCCTTTCCTGGGCCCTTCTGTGCAGGAAGCTCAGCCCTCAGGGCTCAGAGGTGCCAGTCCGGTCCCAGGTCCCCTTGTCT | 3259 |

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FIG. 4B-3

[illegible]

FIG. 4C

| |
|-----------|
| FIG. 5A-1 |
| FIG. 5A-2 |
| FIG. 5A-3 |

FIG. 5A

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CCACGGCTCCGGCGGCGCTGCGCTGAGGGACGGCGGGAGCGCGCTGGCCCTCGCACTCAAAGCCGCCAGCCG 79

GCCCCGGCTCGGCCGACCCGGCGGGGATCTAGGGGTGGCCGACTTCGCCGGACCGTGGCCGCACTGTTCCTGGGAGTTA 158

CTGATCATCTTCTTTGAAGAAAC ATG AAG TTA CAC TAT GTT GCT GTG CTT ACT CTA GCC ATC CTG 223

M F L T W L P E S L S C N K A L C A S D 34
ATG TTC CTG ACA TGG CTT CCA GAA TCA CTG AGC TGT AAC AAA GCA CTC TGT GCT AGT GAT 283

FIG. 5A-1

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V | S | K | C | L | I | Q | E | L | C | Q | C | R | P | G | E | G | N | C | S | 54 |
| GTG | AGC | AAA | TGC | CTC | ATT | CAG | GAG | CTC | TGC | CAG | TGC | CCG | CCG | GGA | GAA | GGC | AAT | TGC | TCC | 343 |
| C | C | K | E | C | M | L | C | L | G | A | L | W | D | E | C | C | D | C | V | 74 |
| TGC | TGT | AAG | GAG | TGC | ATG | CTG | TGT | CTT | GGG | CCC | CTT | TGG | GAC | GAG | TGC | TGT | GAC | TGT | GTT | 403 |
| G | M | C | N | P | R | N | Y | S | D | T | P | P | T | S | K | S | T | V | E | 94 |
| GGT | ATG | TGT | AAT | CCT | CGA | AAT | TAT | AGT | GAC | ACA | CCT | CCA | ACT | TCA | AAG | AGC | ACA | GTG | GAG | 463 |
| E | L | H | E | P | I | P | S | L | F | R | A | L | T | E | G | D | T | Q | L | 114 |
| GAG | CTG | CAT | GAA | CCG | ATC | CCT | TCT | CTC | TTC | CGG | GCA | CTC | ACA | GAA | GGA | GAT | ACT | CAG | TTG | 523 |
| N | W | N | I | V | S | F | P | V | A | E | E | L | S | H | H | E | N | L | V | 134 |
| AAT | TGG | AAC | ATC | GTT | TCT | TTC | CCT | GTT | GCA | GAA | GAA | CTT | TCA | CAT | CAT | GAG | AAT | CTG | GTT | 583 |
| S | F | L | E | T | V | N | Q | P | H | H | Q | N | V | S | V | P | S | N | N | 154 |
| TCA | TTT | TTA | GAA | ACT | GTG | AAC | CAG | CCA | CAC | CAC | CAC | CAG | AAT | GTG | TCT | GTC | CCC | AGC | AAT | 643 |
| V | H | A | P | Y | S | S | D | K | E | H | M | C | T | V | V | Y | F | D | D | 174 |
| GTT | CAC | GCG | CCT | TAT | TCC | AGT | GAC | AAA | GAA | CAC | CAC | ATG | TGT | ACT | GTG | GTT | TAT | TTT | GAT | 703 |
| C | M | S | I | H | Q | C | K | I | S | C | E | S | M | G | A | S | K | Y | R | 194 |
| TGC | ATG | TCC | ATA | CAT | CAG | TGT | AAA | ATA | TCC | TGT | GAG | TCC | ATG | GGA | GCA | TCC | AAA | TAT | CGC | 763 |

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FIG. 5A-2

| | |
|---|------|
| W F H N A C C E C I G P E C I D Y G S K | 214 |
| TGG TTT CAT AAT GCC TGC TGC GAG TGC ATT GGT CCA GAA TGT ATT GAC TAT GGT AGT AAA | 823 |
| T V K C M N C M F * | 224 |
| ACT GTC AAA TGT ATG AAC TGC ATG TTT TAA | 853 |
| AGAAGACAAATGCAACCAAGCAACTTAGTAAATAATAGGTATAAAAGTTATCTGTAGTCGTGTTGTATCT | 932 |
| TGTATCAGAATCCAGTAAGTTAAGTTGTAAAGACTTTCGGAATAAGTTTCTTTTAAATAATGACATAGCCAGTGATGT | 1011 |
| GTTTAATTATATAACTGTCTTACTGATTTTATTCGCCCTTAGCAATAAGCCCTTTTCCTTTTGAATACATGTACAACTTT | 1090 |
| GGTCATATGAGAAGCAGGTGCGCAGAGAAATTCCTTGAAAGATCTGAGGTTTTTAACATGAAGTCTGATGTGTTTCCT | 1169 |
| CTAGCATTCCAAAGGTTTTTGCTTTTGAAAGTGTTAGCAGAACATGTTGATGTTGAATTTATGATTTCTTCATGTGCTAC | 1248 |
| TGTTAGCACACTGAGTTTTTATAGTTGCGACATCATTCCTCATTTGTCCTTTGTTTATCCATTTTATAAATAGAGTAGAT | 1327 |
| ATTTGATATACCACTCTGATAACTCATATAAAATATCATCATATAAAAGCTTAATTTTCATCCCTTTTATGTTGGTTTA | 1406 |
| AAAGGTAAATGCTTACCATAATTTTATAATTGAGAACTCTTACATAGTAGAATCCATTTCTATAATACATGTGTTGACAAA | 1485 |
| GCTTTAGAGAAAGTTTCCTATTCTCTTCCATTTTCCCTGCCCCAAAGTCTGACATAGGCAGTGATGAAGAATCTTTTACC | 1564 |

AAGATTTTCAGGGGTACCTAAGAAATTGCTTTAATGCCACTGCTGGTGTAAATAATTAGCAAGCAAAGCGTTCGTGT 1643
 GACTTCAGGTACCAGCTTAAAGAGCACTAGGGATGGGGAACGAATGCCAAATCAGACTCCACCTAGAGCACCAGGAAAC 1722
 AGCTTGTAACCTGGTAGGGAAATGGTGTCTGTAAGCGGAGGCTGAGCCAGTCCGAGACTGAACCTTGTGCAGCCTTAG 1801
 CCAAGACAAAGCAGTGTTTTTCAGCAGACGGCTGATCGGACAGGAATTGAAGAAGAGAAATTGACTCGTATGAAACAGGAC 1880
 AGGGTGAAATGCTGGGAATTATAATGGGAACAACAACTATCTATGTTCATATTTTGTAAATATTCATTTGTTAAGTTT 1959
 ATATCTGGATATAATGTTCTTTTTTAACAAGTATAATCATATCGTCCGAGGTTAAGATTATGAAATTTTAGAATCTCTA 2038
 TTCAAGATGATGTTCACTCCAAATACACTACAGAAATTAGTCAACATTTTATATAATGTTTCAATAAATGTTTCTTTCA 2117
 ATAAAAAAAAAAAAAAAAA 2135

FIG. 5B

| |
|-----------|
| FIG. 6A-1 |
| FIG. 6A-2 |
| FIG. 6A-3 |

FIG. 6A

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| M | P | S | L | P | A | P | P | A | P | L | L | L | L | L | L | L | L | G | 20 | |
| ATG | CCG | AGC | CTC | CCG | GCC | CCG | CCG | GCC | CCG | CTG | CTG | CTC | CTC | CTG | CTG | CTG | CTC | GGC | 50 | |
| S | R | P | A | R | G | A | G | P | E | P | P | V | L | P | I | R | S | E | K | 40 |
| TCC | CGG | CCG | GCC | CGC | GGC | GCC | GCC | CCA | GAG | CCC | CCC | ATC | CTG | CCC | CTG | TCT | GAG | AAG | 120 | |
| E | P | L | P | V | R | G | A | A | G | C | T | F | G | G | K | V | Y | A | L | 60 |
| GAG | CCG | CTG | CCC | GTT | CGG | GGA | GCG | GCA | GCG | TGC | ACC | TTC | GGC | GGG | AAG | GTC | TAT | GCC | TTG | 180 |

FIG. 6A-1

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Docket No.: MPI2000-540OMNI(M)

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Docket No.: MPI2000-540OMNI(M)

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| D | E | T | W | H | P | D | L | G | E | P | F | G | V | M | R | C | V | L | C | 80 |
| GAG | GAG | ACG | TGG | CAC | CCG | GAC | CTA | GGG | GAG | CCA | TTC | GGG | GTG | ATG | CGC | TGC | GTG | CTG | TGC | 240 |
| A | C | E | A | P | Q | W | G | R | R | T | R | G | P | G | R | V | S | C | K | 100 |
| GCC | TGC | GAG | CCG | CCT | CAG | TGG | GGT | CGC | CGT | ACC | AGG | GGC | CCT | GGC | AGG | GTC | AGC | TGC | AAG | 300 |
| N | I | K | P | E | C | P | T | P | A | C | G | Q | P | R | Q | L | P | G | H | 120 |
| AAC | ATC | AAA | CCA | GAG | TGC | CCA | ACC | CCG | GCC | TGT | GGG | CAG | CCG | CGC | CAG | CTG | CCG | GGA | CAC | 360 |
| C | C | Q | T | C | P | Q | E | R | S | S | S | E | R | Q | P | S | G | L | S | 140 |
| TGC | TGC | CAG | ACC | TGC | CCC | CAG | GAG | CGC | AGC | AGT | TCG | GAG | CGG | CAG | CCG | AGC | GGC | CTG | TCC | 420 |
| F | E | Y | P | R | D | P | E | H | R | S | Y | S | D | R | G | E | P | G | A | 160 |
| TTC | GAG | TAT | CCG | CGG | GAC | CCG | GAG | CAT | CGC | AGT | TAT | AGC | GAC | CGC | GGG | GAG | CCA | GGC | GCT | 480 |
| E | E | R | A | R | G | D | G | H | T | D | F | V | A | L | L | T | G | P | R | 180 |
| GAG | GAG | CGG | GCC | CGT | GGT | GAC | GGC | CAC | ACG | GAC | TTC | GTG | GCG | CTG | CTG | ACA | GGG | CCG | AGG | 540 |
| S | Q | A | V | A | R | A | R | V | S | L | L | R | S | S | L | R | F | S | I | 200 |
| TCG | CAG | CCG | GTG | GCA | CGA | GCC | CGA | GTC | TCG | CTG | CTG | CGC | TCT | AGC | CTC | CGC | TTC | TCT | ATC | 600 |
| S | Y | R | R | L | D | R | P | T | R | I | R | F | S | D | S | N | G | S | V | 220 |
| TCC | TAC | AGG | CGG | CTG | GAC | CGC | CCT | ACC | AGG | ATC | CGC | TTC | TCA | GAC | TCC | AAT | GGC | AGT | GTC | 660 |

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FIG. 6A-2

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| L | F | E | H | P | A | A | P | T | Q | D | G | L | V | C | G | V | W | R | A | 240 |
| CTG | TTT | GAG | CAC | CCT | GCA | GCC | CCC | ACC | CAA | GAT | GGC | CTG | GTC | TGT | GGG | GTG | TGG | CGG | GCA | 720 |
| V | P | R | L | S | L | R | L | L | R | A | E | Q | L | H | V | A | L | V | T | 260 |
| GTG | CCT | CGG | TTG | TCT | CTG | CGG | CTC | CTT | AGG | GCA | GAA | CAG | CTG | CAT | GTG | GCA | CTT | GTG | ACA | 780 |
| L | T | H | P | S | G | E | V | W | G | P | L | I | R | H | R | A | L | A | A | 280 |
| CTC | ACT | CAC | CCT | TCA | GGG | GAG | GTC | TGG | GGG | CCT | CTC | ATC | CCG | CAC | CGG | GCC | CTG | GCT | GCA | 840 |
| E | T | F | S | A | I | L | T | L | E | G | P | P | Q | Q | G | V | G | G | I | 300 |
| GAG | ACC | TTC | AGT | GCC | ATC | CTG | ACT | CTA | GAA | GGC | CCC | CCA | CAG | CAG | GCC | GTA | GGG | GCC | ATC | 900 |
| T | L | L | T | L | S | D | T | E | D | S | L | H | F | L | L | L | F | R | G | 320 |
| ACC | CTG | CTC | ACT | CTC | AGT | GAC | ACA | GAG | GAC | TCC | TTG | CAT | TTT | TTG | CTG | CTC | TTC | CGA | GGG | 960 |
| L | L | E | P | R | S | G | G | L | T | Q | V | P | L | R | L | Q | I | L | H | 340 |
| CTG | CTG | GAA | CCC | AGG | AGT | GGG | GGA | CTA | ACC | CAG | GTT | CCC | TTG | AGG | CTC | CAG | ATT | CTA | CAC | 1020 |
| Q | G | Q | L | L | R | E | L | Q | A | N | V | S | A | Q | E | P | G | F | A | 360 |
| CAG | GGG | CAG | CTA | CTG | CGA | GAA | CTT | CAG | GCC | AAT | GTC | TCA | GCC | CAG | GAA | CCA | GGC | TTT | GCT | 1080 |
| E | V | L | P | N | L | T | V | Q | E | M | D | W | L | V | L | G | E | L | Q | 380 |
| GAG | GTG | CTG | CCC | AAC | CTG | ACA | GTC | CAG | GAG | ATG | GAC | TGG | CTG | GTG | CTG | GGG | GAG | CTG | CAG | 1140 |

| |
|-----------|
| FIG. 6B-1 |
| FIG. 6B-2 |
| FIG. 6B-3 |

FIG. 6B

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| M | A | L | E | W | A | G | R | P | G | L | R | I | S | G | H | I | A | A | R | 400 |
| ATG | GCC | CTG | GAG | TGG | GCA | GGC | AGG | CCA | GGG | CTG | CGC | ATC | AGT | GGA | CAC | ATT | GCT | GCC | AGG | 1200 |
| K | S | C | D | V | L | Q | S | V | L | C | G | A | D | A | L | I | P | V | Q | 420 |
| AAG | AGC | TGC | GAC | GTC | CTG | CAA | AGT | GTC | CTT | TGT | GGG | GCT | GAT | GCC | CTG | ATC | CCA | GTC | CAG | 1260 |
| T | G | A | A | G | S | A | S | L | T | L | L | G | N | G | S | L | I | Y | Q | 440 |
| ACG | GGT | GCT | GCC | GGC | TCA | GCC | AGC | CTC | ACG | CTG | CTA | GGA | AAT | GGC | TCC | CTG | ATC | TAT | CAG | 1320 |

V Q V V G T S S E V V A M T L E T K P Q 460
 GTG CAA GTG GTA GGG ACA AGC AGT GAG GTG GTG GAG ACC AAG CCT CAG 1380

R R D Q R T V L C H M A G L Q P G G H T 480
 CGG AGG GAT CAG CGC ACT GTC CTG TGC CAC ATG GCT GGA CTC CAG CCA GGA CAC ACG 1440

A V G I C P G L G A R G A H M L L Q N E 500
 GCC GTG GGT ATC TGC CCT CCT GGG CTG GGT GCC CGA GGG GCT CAT ATG CTG CTG CAG AAT GAG 1500

L F L N V G T K D F P D G E L R G H V A 520
 CTC TTC CTG AAC GTG GGC ACC AAG GAC TTC CCA GAC GGA GAG CTT CGG GGG CAC GTG GCT 1560

A L P Y C G H S A R H D T L S V P L A G 540
 GCC CTG CCC TAC TGT GGG CAT AGC GCC CGC CAT GAC ACG CTG TCC GTG CCC CTA GCA GGA 1620

A L V L P P V K S Q A A G H A W L S L D 560
 GCC CTG GTG CTA CCC CCT GTG AAG AGC CAA GCA GCA GGG CAC GCC TGG CTT TCC TTG GAT 1680

T H C H L H Y E V L L A G L G G S E Q G 580
 ACC CAC TGT CAC CTG CAC TAT GAA GTG CTG CTG GCT GGG CTT GGT GGC TCA GAA CAA GGC 1740

T V T A H L L G P P G T P G P R R L L K 600
 ACT GTC ACT GCC CAC CTC CTT GGG CCT CCT GGA ACG CCA GGG CCT CGG CCG CTG CTG AAG 1800

G F Y G S E A Q G V V K D L E P E L L R 620
 GGA TTC TAT GGC TCA GAG GCC CAG GGT GTG GTG AAG GAC CTG GAG CCG GAA CTG CTG CGG 1860

H L A K G M A S L M I T T K G S P R G E 640
 CAC CTG GCA AAA GGC ATG GCC TCC CTG ATG ATC ACC AAG GGT AGC CCC AGA GGG GAG 1920

L R G Q R R T V I C D P V V C P P P S C 660
 CTC CGA GGG CAG AGA CGA ACG GTG ATC TGT GAC CCG GTG GTG TGC CCA CCG CCC AGC TGC 1980

P H P V Q A P D Q C C C P V C P E K Q D V 680
 CCA CAC CCG GTG CAG GCT CCC GAC CAG TGC TGC CCT GGT TGC CCT GAG AAA CAA GAT GTC 2040

R D L P G L P R S R D P G E G C Y F D G 700
 AGA GAC TTG CCA GGG CTG CCA AGG AGC CCG GAC CCA GGA GAG GGC TGC TAT TTT GAT GGT 2100

D R S W R A A G T R W H P V V P P F G L 720
 GAC CGG AGC TGG CGG GCA GCG GGT ACG CCG TGG CAC CCC GTT GTG CCC CCC TTT GGC TTA 2160

I K C A V C T C K G G T G E V H C E K V 740
 ATT AAG TGT GCT GTC TGC ACC TGC AAG GGG GGC ACT GGA GAG GTG CAC TGT GAG AAG GTG 2220

Q C P R L A C A Q P V R V N P T D C C K 760
 CAG TGT CCC CGG CTG GCC TGT GCC CAG CCT GTG CGT GTC AAC CCC ACC GAC TGC TGC AAA 2280

| |
|-----------|
| FIG. 6C-1 |
| FIG. 6C-2 |

FIG. 6C

| | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Q | C | P | V | G | S | G | A | H | P | Q | L | G | D | P | M | Q | A | D | G | 780 |
| CAG | TGT | CCA | GTG | GGG | TCG | GGG | GCC | CAC | CCC | CAG | CTG | GGG | GAC | CCC | ATG | CAG | GCT | GAT | GGG | 2340 |
| P | R | G | C | R | F | A | G | Q | W | F | P | E | S | Q | S | W | H | P | S | 800 |
| CCC | CGG | GGC | TGC | CGT | TTT | GCT | GGG | CAG | TGG | TTC | CCA | GAG | AGT | CAG | AGC | TGG | CAC | CCC | TCA | 2400 |
| V | P | P | F | G | E | M | S | C | I | T | C | R | C | G | A | G | V | P | H | 820 |
| GTG | CCC | CCT | TTT | GGA | GAG | ATG | AGC | TGT | ATC | ACC | TGC | AGA | TGT | GGG | GCA | GGG | GTG | CCT | CAC | 2460 |

FIG. 6C-1

| | | | | | | | | | | | | | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| C | E | R | D | D | C | S | L | P | L | S | C | G | S | G | K | E | S | R | C | 840 |
| TGT | GAG | CGG | GAT | GAC | TGT | TCA | CTG | CCA | CTG | TCC | TGT | GGC | TCG | GGG | AAG | GAG | AGT | CGA | TGC | 2520 |
| C | S | R | C | T | A | H | R | R | P | A | P | E | T | R | T | D | P | E | L | 860 |
| TGT | TCC | CGC | TGC | ACG | GCC | CAC | CGG | CGG | CCA | GCC | CCA | GAG | ACC | AGA | ACT | GAT | CCA | GAG | CTG | 2580 |
| E | K | E | A | E | G | S | * | | | | | | | | | | | | | 868 |
| GAG | AAA | GAA | GCC | GAA | GCC | TCT | TAG | | | | | | | | | | | | | 2604 |
| GGAGCAGCCAGGGCCAAAGTGACCAAGAGGATGGGGCCCTGAGCTGGGAAGGGGTGGCATCGAGGACCTTCTTGCATT | | | | | | | | | | | | | | | | | | | | 2683 |
| CTCCTGTGGGAAGCCAGTGCCCTTTTGCTCCTCTGTCTGCTGCTCTACTCCACCCACCTACCTTTGGGAACACAGCTC | | | | | | | | | | | | | | | | | | | | 2762 |
| CACAAGGGGAGAGGCAGCTGGGGCCAGACCGAGGTACAGCCACTCCAAGTCCTGCCCTGCCACCCCTCGGCTCTGTCTC | | | | | | | | | | | | | | | | | | | | 2841 |
| TTGGAAGCCCCACCCCTTTCCTCTGTACATAATGTCACTGGCTGTGGGATTTTAAATTATCTTCACTCAGCACCA | | | | | | | | | | | | | | | | | | | | 2920 |
| AGGGCCCCCGACACTCCACTCCTGCTGCCCTGAGCTGAGCAGAGTCATTATTGGAGAGTTTGTATTTATAAACAT | | | | | | | | | | | | | | | | | | | | 2999 |
| TTCTTTTTCAGTCAAAAAAATAAAAAAGGGGGCCGC | | | | | | | | | | | | | | | | | | | | 3037 |

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APPAPLLLLLGLLSRPARGPEPPVLPVIRSEKEPLPVRGAAGCTFGG 60
..|: ||::|::: | ::::.....| |..| | | | . : : | | | | |
QCPPIILLVWTLWIM....AVDCSRPKVFLPIQPEQEPLQSKTPAGCTFGG 47
.
.
.
KVYALDETHWHPDLGEPFGVMRCVLCACEAPQWGRRTRGPGRVSCKNIKPE 110
|.|.|:..| | | | | | | | | | : | | | | | | | | | | | | | | | | | :
KFYSLEDSWHPDLGEPFGVMHCVLCYCE.PQRSRRGKPSGKVSCKNIKHD 96
.
.
.
CPTPACGQPRQLPGHCCQTCPQERSSSERQPSGL..SFEYPRDPEHRSYS 158
| | . | : . | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
CPSPCANPILLPLHCCKTCPKAPPPPIKKSDFVFDGFEYFQEKDDDLYN 146
.
.
.
DRGEPGAEERARGDGHTDFVALLTGPR.....SQAVARARVSLLRSSLR 202
| | : : : : | : : : : : | | | | : | . : | | : | | . | | | . |
DRSYLSSDDVAVEESRSEYVALLTAPSHVWPPVTSGVAKARFNLQRSNLL 196
.
.
.
FSISYRRLDRPTRIRFSDSNGSVLFEHPA...APTQDGLVCGVWRAVPRL 249
| | | . | : : : | | | | | | | | | | | | | | | | | | | | | | | | | | |
FSITYKWIDRLSRIRFSDLDGSVLFEHPVHRMGSPRDDTICGIWRSNLRS 246
.
.
.
SLRLLRAEQLHVALVTLTHPSGEVWGPLIRHRALAAETFSAILTLEGPPQ 299
. | | | | | : : : | . | | | | | . . . | : . | : : : | : | | | : | | | : : :
TLRLLRMGHILVSLVTTTLSEPEISGKIVKHKALFSESFSALLTPEDSDE 296
.
.
.
QGVGGITLLTSLDTEDSLHFLLLFRGLLEPRSGGLTQVPLRLQILHQGQL 349
|. | | : : : | | | | | . : | . | | | : | : : | | | : . : : | : | : : | | | : : :
TGGGGLAMLTLSVDVDDLHFI MLRLGLSGEED...QIPILVQISHQNHV 343
.
.
.
LRELQANVSAQEPGFAEVL PNLTVQEMDWLV LGELQMALEWAGRPGLRIS 399
: | | | | | : | | | | | . : | | | | | : | . | | | | | . | : | : : : . | | . . : |
IRELYANISAEQDFAEVL PDLSSREMLWLAQGQLEISVQTEGRRPQSMS 393
.
.
.
GHIAARKSCDVLQSVLCGADALIPVQTGAAGSASLTLLGNGSLIYQVQVV 449
| | . . | | | | | . | | | | | : | : | | | | . . | | | . | | | | : | | : | | | : | : .
GIITVRKSCDTLQSVLSGGDALNPTKTGAVGSASITLHENGTTLEYOIOIA 443

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FIG. 7A

GTSSEVAMTLETQKPRRDQRTVLCHMAGLQPGGHTAVGICPGLGARGAH 499
|||.|.|.:|||||.|:..|.:|.|. .:|:.|. |. :. ||:|
GTMSTVTAVTLETKPRRKTKRNILHDMSKDYHDGR.VWGYWIDANARDLH 492
.
MLLQNELFLNVGTKDFPDGELRGHVAAALPYCGHSARHDTLSVPLAGALVL 549
|||||.|||||:|||||.:|||||:~::~| |.:| .|||.:.|.|||||.:.:|
MLLQSELFLNVATKDFQEGELRGQITPLLYSGLWARYEKLVPVLAGQFVS 542
.
PPVKSAAGHAWLSLDTHCHLHYEVLLVGLGGSEQGTVTAHLLG..... 593
||:~::..| |||||:|||||.|||||||:~::~. |||. |:~:::. |||||
PPIRTGSAGHAWVSLDEHCHLHYQIVVTGLGKAEDAALNAHLHGFAELGE 592
.
. PPGTPGPRRLKGFYGSEAQGCVKDLPELLRHLAKGMASLMITTKGSP 642
~::..| |:~||||||| |||||: |||||. |:~| | : ~: |||. |
VGESSPGHKRLLKGFYGSEAQGSVKDLDLELLGHLSRGTAFIQVSTKLNP 642
.
RGELRG..... 648
|||:~||
RGEIRGQIHIPNSCESGGVSLTPEEPEYEYEIYEEGRQRDPDDL RKDPRA 692
.
..... QRRTVICDPVVCPPPSCPHPVQA 671
|:~|||||||:|||||. |:~||:
CSFEGQLRAHGSRWAPDYDRKCSVCSCQKRTVICDPIVCPPLNCSQPVHL 742
.
PDQCCPVCPEKQDV RDLPGLPRS RDPGEGCYFDGDRSWRAAGTRWHPVVP 721
|||||||. ||.~::|:~:.|.|. |.:~||:~|||||||:~|||||||. ||
PDQCCPVCEEKKEMREVKKPERAR.TSEGCFDGD RSWKAAGTRWHPFVP 791
.
PFGLIKCAVCTCKGGTG EVHCEKVQC PRLACAQPVRVNPTDCCKQCPVGS 771
|||||||:~|||||:~||||||| ||:~|. |.~|:~|. |. ||. ||||| |||:~.
PFGLIKCAICTCKGSTGEVHCEKVTCPKLSCTNP I RANPSDCCKQCPVEE 841
.
GAHPQLGDPMQADGPRGCRFAGQWFPESSQSWHPSVPPFGEMSCITCRCGA 821
.. |:~|. |. ||:~| ||:~| |:~|:~|:~|:~|. |||. ||||| |||. |:~|| |:~.
RSPMELADSMQSDGAGSCRFRHWYPNHERWHPTVPPFGEMKCVTCTCAE 891

FIG. 7B

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GVPHCERDDCSLPLSCGSGKESRCCSRC.....TAHRRPAPETRTDPEL 865
|:::| |::|. . :...:| .|||.::|: ...|||. .:
GITQCRRQECTGTTTCGTGSKRDRCCCTKCKDANQDEDEKVKSDETRTPWSF 941

FIG. 7C

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